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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/839,943      | 04/19/2001  | Ojas T. Choksi       | 062891.0513         | 4099             |

7590 08/05/2005  
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EXAMINER

RYMAN, DANIEL J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2665

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/839,943             | CHOKSI, OJAS T.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Daniel J. Ryman        | 2665                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 April 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/19/01, 6/10/02</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. Examiner requests that Applicant update the application information on pg. 1, lines 2-6 to reflect any changes in the status of that application.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 13, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 5, 13, and 21 disclose that the allowed number of retransmissions for the frame increases as the position of the frame in the set of related frames increases; however, it is not clear from the claim what constitutes increasing the “position of the frame in the set of frames.” Since “increasing” is not defined in the claim, “increasing” could be interpreted to mean “a frame position that is closer to the start of the packet” (the highest frame being the frame containing the start of packet). Likewise, “increasing” could be interpreted to mean “a frame position that is closer to the end of packet” (the highest frame being the frame containing the end of packet). Therefore, for the purposes of prior art rejections, Examiner will interpret “the allowed number of retransmissions for the frame increases as the position of the frame in the set of related frames increases” as “the allowed number of retransmissions for the frame increases as the number of successfully received frames for the packet increases.” See Specification, page 16, lines 23-32.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 26 is rejected under 35 U.S.C. 102(e) as being anticipated by Strawczynski et al. (USPN 6,628,641).

6. Regarding claim 26, Strawczynski discloses a network element for a wireless network, comprising: logic encoded in media; and the logic operable to drop a set of remaining frames for a packet identified by a receiving device as having a frame unsuccessfully received after an allowed number of retransmissions (col. 8, lines 2-20) where the allowed number of retransmissions can be any number.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 8, 9, 11, 16, 17, 19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wager et al. (USPN 6,519,223) in view of Strawczynski et al. (USPN 6,628,641).

Art Unit: 2665

9. Regarding claims 1, 9, and 17, Wager discloses a method and system for efficient utilization of transmission resources in a wireless network, the method comprising the steps of and the system comprising means for: in response to at least unsuccessfully receiving a radio frame for a packet from a wireless link, requesting retransmission of the frame up to an allowed number of retransmissions (col. 4, lines 38-67); and in response to at least unsuccessfully receiving the frame from the allowed number of retransmissions, generating a signal for transmission to a device receiving the frame, the signal operable to ensure that the device discards a set of remaining frames for the packet (col. 5, line 57-col. 6, line 1).

Wager does not expressly disclose that in response to at least unsuccessfully receiving the frame from the allowed number of retransmissions, generating a signal for transmission to a device transmitting the frame, the signal operable to prevent the device from transmitting a set of remaining frames for the packet. Strawczynski teaches, in a wireless transmission system, in response to at least unsuccessfully receiving the frame from the allowed number of retransmissions, generating a signal for transmission to a device transmitting the frame, the signal operable to prevent the device from transmitting a set of remaining frames for the packet (col. 8, lines 2-20) in order to “ensure that bandwidth is not wasted” (col. 7, line 66-col. 8, line 1). Here, the signaling of Wager and Strawczynski achieves the same result, namely ensuring that bandwidth is not wasted, however the implementation is different. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the signaling of Strawczynski for the signaling of Wager since these signaling systems are equivalent. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to, in response to at least unsuccessfully receiving the frame from the allowed number

Art Unit: 2665

of retransmissions, generate a signal for transmission to a device transmitting the frame, the signal operable to prevent the device from transmitting a set of remaining frames for the packet in order to ensure that bandwidth is not wasted.

10. Regarding claims 3, 11, and 19, Wager in view of Strawczynski implicitly discloses that the radio frame identifies the packet and the signal for transmission to the device transmitting the frame identifies the packet (Strawczynski: col. 8, lines 2-20).

11. Regarding claims 8, 16, and 24, Wager in view of Strawczynski discloses that the signal for transmission to the device transmitting the frame is operable to prevent the device from transmitting the set of remaining frames by causing the device to drop the set of remaining frames (Strawczynski: col. 8, lines 2-20).

12. Claims 2, 10, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wager et al. (USPN 6,519,223) in view of Strawczynski et al. (USPN 6,628,641) as applied to claims 1, 9, and 17 above, and further in view of Lazraq et al. (USPN 6,330,435).

13. Regarding claims 2, 10, 18, and 27, Wager in view of Strawczynski does not expressly disclose that the signal comprises a bitmap identifying the frame and identifying a disparate frame for retransmission. Lazraq teaches, in a system for signaling a packet discard notification, having the signal comprise a bitmap identifying the frame and identifying a disparate frame for retransmission (Fig. 6) (col. 3, lines 4-48) when the sequence numbers of the frames are not in sequence (col. 3, lines 4-16). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the signal comprise a bitmap identifying the frame and identifying a disparate frame for retransmission for situations in which the sequence numbers of the frames are not in sequence.

Art Unit: 2665

14. Claims 4, 6, 7, 12, 14, 15, 20, 22, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wager et al. (USPN 6,519,223) in view of Strawczynski et al. (USPN 6,628,641) as applied to claims 1, 9, and 17 above, and further in view of Cheng et al. (USPN 6,088,342) and Rathonyi et al. (USPN 6,532,211).

15. Regarding claims 4, 12, and 20, Wager in view of Strawczynski does not expressly disclose determining a position of the frame in a set of related frames for the packet; and determining the allowed number of retransmissions for the frame based on the position of the frame in the set of related frames. However, Wager in view of Strawczynski does disclose varying the allowed number of transmissions for a frame (Wager: col. 2, lines 56-58 and col. 5, lines 32-36). Cheng teaches, in a wireless communication system, dynamically determining an allowed number of retransmissions for a frame (col. 3, line 65-col. 4, line 3) in order to prevent delays and quality of service degradations (col. 4, lines 32-36). Rathonyi teaches that a retransmitted frame at the end of a packet will cause more delay for the packet than a retransmitted frame in the middle of the packet (col. 2, lines 46-61). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine a position of the frame in a set of related frames for the packet and to determine the allowed number of retransmissions for the frame based on the position of the frame in the set of related frames in order to prevent delays for the packet.

16. Regarding claims 6, 14, and 22, Wager in view of Strawczynski in further view of Cheng and Rathonyi suggests that the set of related frames comprises all frames for the packet (Rathonyi: col. 2, lines 46-61).

Art Unit: 2665

17. Regarding claims 7, 15, and 23, Wager in view of Strawczynski in further view of Cheng and Rathonyi suggests that the set of related frames comprises a set of successfully received frames for the packet (Rathonyi: col. 2, lines 46-61).

18. Regarding claim 25, incorporating the rejection of claims 1, 9, and 17, Wager in view of Strawczynski discloses each limitation of claim 25, as outlined in the rejection of claims 1, 9, and 17, except using a CDMA network as the wireless network and determining a position of the radio frame in a set of related frames for the packet and then determining an allowed number of retransmissions for the frame based on the position of the frame in the set of related frames. However, Wager in view of Strawczynski further discloses using a CDMA network as the wireless network (Strawczynski: col. 3, lines 56-58). Further, Wager in view of Strawczynski discloses varying the allowed number of transmissions for a frame (Wager: col. 2, lines 56-58 and col. 5, lines 32-36). Cheng teaches, in a wireless communication system, dynamically determining an allowed number of retransmissions for a frame (col. 3, line 65-col. 4, line 3) in order to prevent delays and quality of service degradations (col. 4, lines 32-36). Rathonyi teaches that a retransmitted frame at the end of a packet will cause more delay for the packet than a retransmitted frame in the middle of the packet (col. 2, lines 46-61). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine a position of the frame in a set of related frames for the packet and to determine the allowed number of retransmissions for the frame based on the position of the frame in the set of related frames in order to prevent delays and quality of service degradations for the packet.



Art Unit: 2665

*Allowable Subject Matter*

19. Claims 5, 13, and 31 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art suggests that the allowed number of retransmissions would decrease as the number of successful frame transmissions increased in order to decrease the delay of the packet. *See* Rathonyi et al. (USPN 6,532,211), col. 2, lines 46-61.

*Conclusion*

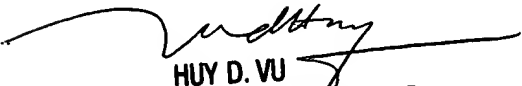
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

072

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